

Optometry DistList

Instance 2017: 45

Wednesday, 1 April 2017

Today's subjects

- No Irritating Drops for Eye Test Anymore
- How Do Animals See in the Dark?
- For a Half-Century, She Has Led the Blind with Chutzpah (and Often, No Cane)
- Gymnast Overcomes Vogt-Koyanagi-Harada Disease to Score 9.9 on Floor Routine
- SEED and Brien Holden Vision Institute Collaborate On New Technology in Contact Lenses
- Post Graduate Diploma in Optometry and Vision Sciences (2017-2019) – LVPEI

Date: 22 March, 2017

From: Suharsha (pvnssuharsha@gmail.com)

Subject: **No Irritating Drops for Eye Test Anymore**

Scientists have developed a cheap, portable camera that can photograph the retina without administering the irritating pupil-dilating eye drops. Made out of simple parts mostly available online, the camera's total cost is about \$185, researchers from University of Illinois at Chicago said.

The camera works by first emitting infrared light, which the iris -the muscle that controls the opening of the pupil- does not react to.

The camera is based on the Rasp berry Pi 2 computer, a low cost, single-board computer designed to teach children how to build and programme computers.

For the complete article, please visit: <http://timesofindia.indiatimes.com/life-style/health-fitness/health-news/you-dont-need-irritating-drops-for-eye-test-anymore/articleshow/57767451.cms>

Date: 23 March, 2017

From: Parthasarathi Kalaiselvan (parthuoptom@gmail.com)

Subject: **How Do Animals See in the Dark?**

Nocturnal insects have eyes that act like cameras to enhance their light-gathering abilities.

On a moonless night, light levels can be more than 100m times dimmer than in bright daylight. Yet while we are nearly blind and quite helpless in the dark, cats are out stalking prey and moths are flying agilely between flowers on our balconies.

Despite their diminutive visual systems, it turns out that nocturnal insects see amazingly well in dim light. In recent years we have discovered that nocturnal insects can avoid and fixate on obstacles during flight, distinguish colours, detect faint movements, learn visual landmarks and use them for homing. They can even orient themselves using the faint celestial polarisation pattern produced by the moon and navigate using the constellations of stars in the sky.

To find out how this kind of performance is possible, nocturnal hawkmoths were studied.

It was discovered that this moth can distinguish colors at night, the first nocturnal animal known to do so. But this moth recently revealed another of its secrets: the neural tricks it uses to see well in extremely dim light. These tricks are certainly used by other nocturnal insects like *Megalopta*. By studying the physiology of neural

circuits in the visual centres of the brain, we discovered that *Deilephila* can see reliably in dim light by effectively adding together the photons it has collected from different points in space and time.

To add together photons in space, the individual pixels of the image sensor can be pooled together to create fewer but larger (and so more light-sensitive) “super pixels”. Again, the downside of this strategy is that even though the image becomes brighter, it also becomes blurrier and finer spatial details disappear.

Physiological work has revealed that this neural summation of photons in time and space is immensely beneficial to nocturnal *Deilephila*. At all nocturnal light intensities, from dusk to starlight levels, summation substantially boosts *Deilephila*'s ability to see well in dim light. In fact, thanks to these neural mechanisms, *Deilephila* can see at light intensities around 100 times dimmer than it could otherwise. The benefits of summation are so great that other nocturnal insects, like Megalopta, very likely rely on it to see well in dim light as well.

For the complete article, please visit: <https://thewire.in/117391/animals-see-dark/>

Date: 25 March, 2017

From: Sharath N (sharathptom@gmail.com)

Subject: **For a Half-Century, She Has Led the Blind with Chutzpah (and Often, No Cane)**

“It’s like the blind leading the blind,” Rosemary Romano, 79, said folding up her cane. “But with a positive connotation.” Ms. Romano, who is blind, has been leading blind students through life and work lessons for 54 years. As an instructor of typing and assistive technology at Helen Keller Services for the Blind in Downtown Brooklyn, she dispenses tricks and tips, such as where to find the hyphen on a computer keyboard — the key to the right of the zero, best hit with your right pinkie — or what keystroke will locate a lost cursor.

But more than touch-typing, basic Braille and clerical skills, Ms. Romano’s real lessons come from the way she lives her life and leads by example. She has inspired generations of blind students to become office workers, teachers and lawyers, and has delayed retiring for years because, she said, “I still had something to bring to the table.” But this month at work is her last, and even as she wraps up lessons with her students, she stays firm with them.

She has never coddled. “You’re not doing them any good by going easy on them,” said Ms. Romano, who summons the style of Anne Sullivan, the indefatigable instructor of Helen Keller, to be a sensitive but stern taskmaster.

She met her husband, Frank Romano, at the school. He was an administrator and also blind. As a couple, they developed homemaking methods. To match clothes, she would sew little Braille labels into his suits and shirts as color indicators. She matched her own clothes by keeping them organized, separating prints and solids. Since her husband’s death almost 20 years ago, Ms. Romano has drawn on the toughness she learned growing up in the East New York section of Brooklyn.

Her father was a sharp dresser who impressed that quality on his three children. He held Rosemary to the same strict standards as her siblings, which instilled a sense of confident normalcy. “To this day, I wouldn’t step outside without being put together,” said Ms. Romano, who for years wore suits to work and always looked immaculate, down to her makeup. Weekends are still for shopping and manicures. “Some people go to Mass; I go to the beauty parlor,” she said.

For the complete article, please visit: <https://www.nytimes.com/2017/03/23/nyregion/for-a-half-century-she-has-led-the-blind-with-chutzpah-and-often-no-cane.html>

Date: 27 March, 2017

From: Sandhya Shekar (sandhya.shekar@indiavisioninstitute.org)

Subject: **Gymnast Overcomes Vogt-Koyanagi-Harada Disease to Score 9.9 on Floor Routine**

Last fall, after a strenuous workout on a hot September night, UCLA gymnast Macy Toronjo had some blurry vision that she assumed was due to dehydration. She drank some water and went to bed. The next morning, she was legally blind. Subsequent tests revealed she had Vogt-Koyanagi-Harada disease— a rare, likely autoimmune, disease that affects melanin-rich organs. Treatment, like many autoimmune conditions, is the aggressive use of corticosteroids.

With treatment, her vision did return but for an upcoming gymnastics star, the use of corticosteroids is a major setback. Overwhelming fatigue greatly inhibited Macy’s ability to practice. Then she slowly began to return to her old self. In January, she was strong enough to perform in a few exhibition routines.

Then at the recent meet, she returned to the floor with a score of 9.9 from the judges and an overflowing of support from her team mates.

Vogt-Koyanagi-Harada disease is a rare disease that can cause temporary blindness. The cause is not certain but it is believed to be an autoimmune disease that targets organs rich in melanin (skin, eyes, neural tissue).

For the complete article and video, please visit: <http://www.raredr.com/news/gymnast-vkh-disease>

Date: 23 March, 2017

From: Stephen Davis (s.davis@brienholdenvision.org)

Subject: **SEED and Brien Holden Vision Institute Collaborate On New Technology in Contact Lenses**

There are about 130 million contact lens wearers globally, a relatively small number when compared to the total population needing vision correction (several billions). New technology to provide superior vision correction is critical to meeting the needs of contact lens wearers and to expand the contact lens market.

“Collaborating with Brien Holden Vision Institute demonstrates SEED's commitment in research and development to meet a wider range of patient needs for contact lens wear”, said Mr Masahiro Urakabe, President and CEO of SEED.

“The corporate mission of SEED is ‘Support your vision’, therefore SEED commits to developing and distributing good quality contact lenses to accommodate the diverse vision correction and lifestyle requirements of patients. The start of this new collaboration is a very exciting opportunity to deliver the next generation of contact lenses”, added Mr Urakabe.

Prof Kovin Naidoo, CEO of Brien Holden Vision Institute, said the opportunity to collaborate with one of Asia’s leading contact lens companies with a fast growing global presence would help take its technology global. “We are thrilled that SEED saw a strong commercial opportunity to exploit our research and development capabilities and deliver what we believe will be superior products to consumers,” he said.

“This continues our strong history of collaborating with contact lens companies to bring world class products to market and impact on peoples’ quality of life. It is an affirmation of the quality research that our team has consistently produced.”

To know more about SEED and BHVI, please click here <https://www.brienholdenvision.org/news/item/94-seed-and-brien-holden-vision-institute-collaborate-on-new-contact-lens-technology.html>

Date: 23 March, 2017

From: Lakshmi Nair (lakshminair@lvpei.org)

Subject: **Post Graduate Diploma in Optometry and Vision Sciences (2017-2019) - L V Prasad Eye Institute**

Brien Holden Institute of Optometry and Vision Sciences (BHIOVS), L V Prasad Eye Institute-Hyderabad is pleased to inform that we will be starting the **Post Graduate Diploma in Optometry and Vision Sciences** from August 2017 and the application process for the same has started. PGDOVS is an 18 months program

The examination for this program will be conducted through an online portal at various examination centers on **11th June 2017 (Sunday)**.

For complete information and application form, please click here

http://www.lvpei.org/events/2017/Optometry_Vision_Sciences/

India Vision Institute

Plot No 212, No 45, Palkalai Nagar,

7th Link Road, Palavakkam,

Chennai - 600041, TN, India

Tel. No. : +91 - 44 - 24515353

Email: ivi@indiavisioninstitute.org

Web: www.indiavisioninstitute.org

Note:

To subscribe to OptDistList, please send an email to info@indiavisioninstitute.org with the subject line titled 'SUBSCRIBE'

To unsubscribe from OptDistList, please send an email to info@indiavisioninstitute.org with the subject line titled 'UNSUBSCRIBE'.

Administrivia:

The OptDistList is a service provided by the India Vision Institute (IVI)

DistList postings are for informational purposes only and do not imply endorsement by IVI

Instructions for DistList postings:

IVI invites contributions including latest updates and new developments in Optometry, innovative ideas, optometry job vacancies, conferences, links to interesting articles and other latest happenings. All contributions need to be in word format (not more than two to three paragraphs including a title). Send in your contributions with your name and contact details to info@indiavisioninstitute.org

DistList Archives:

All instances of the DistList are available (both for browsing by whole items and searching for individual messages):

<http://www.indiavisioninstitute.org/optdistlist.php>
